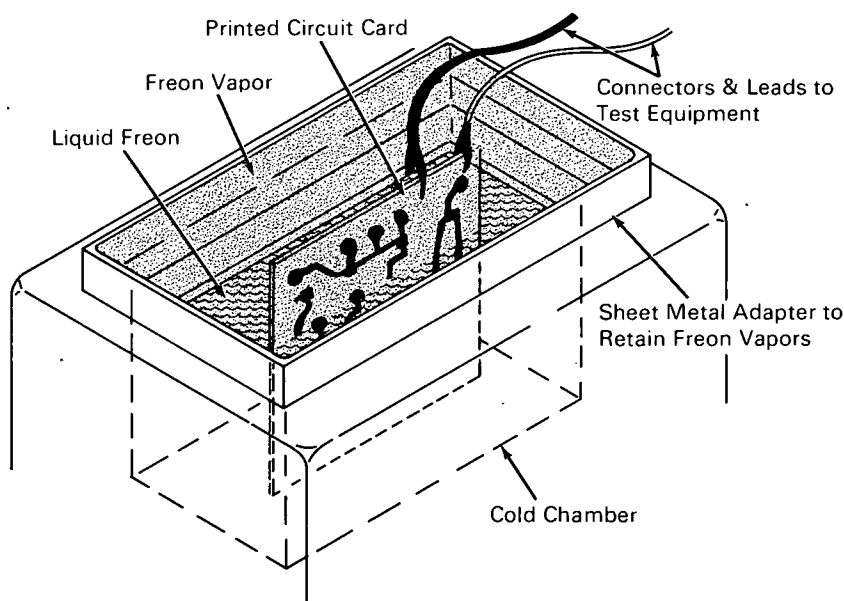


# NASA TECH BRIEF



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## A Vapor Barrier for Cold Testing Printed Circuit Cards



The Cold Chamber Arrangement for Testing Printed Circuit Cards

The innovation described in this Tech Brief is a method for preventing the formation of frost on printed circuit cards and part holders during cold testing at sub-zero temperatures. Previous methods required a dry box installed on top of the cold chamber and the use of a dry gas under positive pressure.

The figure illustrates an arrangement for testing the printed circuit cards. The freon permits rapid attainment of the temperature required for testing the parts. The vapors from the liquid freon prevent the formation of frost on the portion of the card which does not require immersion in the freon.

### Notes:

1. This innovation may be of interest to personnel engaged in testing electronic circuitry.

2. Requests for further information may be directed to:  
Technology Utilization Officer  
Marshall Space Flight Center  
Huntsville, Alabama 35812  
Reference: B70-10172

### Patent status:

Inquiries about obtaining rights for the commercial use of this invention may be made to NASA, Code GP, Washington, D.C. 20546.

Source: Robert E. McNeill and Dan A. Cross of  
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Category 01